

New England School of Acupuncture
Biological Chemistry
Syllabus for Fall 2001

Instructor: Tyler Heibeck

Phone Number:

Email Address:

Course Web site:

Course Time: Wednesdays 5 – 8:45 p.m. May 29, 2002 – August 14, 2002.

Course Overview:

This course will be a survey of biochemistry. The topics covered include types of bioorganic molecules and their structure, reactions of bio-molecules, biological information, and an examination of several metabolic pathways. The goal of the course is to give you an introductory understanding of the chemistry of life. Both chemical and biological perspectives will be used as appropriate.

Text Book:

John McMurray, Mary E. Castellion. *Fundamentals of General, Organic, and Biological Chemistry*. 3rd Ed.
Prentice Hall: New Jersey (1999)

Some advice:

There is a lot of material to cover in this course. You are encouraged to not get behind in your coverage of the material. Chemistry is usually not an easy subject to study and many find it difficult. I will strive to make the material approachable to the most people and at the same time provide some challenge. Read the material assigned before coming to class and try the in-chapter problems. Like any science or craft, chemistry requires practice. Don't just glaze over the chapters, not do any problems and think that you will understand. Challenge yourself and get your hands dirty. If you feel overwhelmed or do not understand something, please speak with me sooner than later.

Grading:

Exams and quizzes:

Mechanism	Style	Number	% of final grade	Total %
Quizzes	Collaborative, open-book	4 (drop 1)	9 1/3	28
Exams	Individual, TBA	2	21	42
Final	Individual, open-book	1	30	30

As outlined in the table above grading will be a combination of quizzes and exams. Quizzes will be derived from the text. You will have access to your book, notes, and each other for the testing period (about 30 minutes). For exams you will not be permitted to collaborate. It will be announced whether the exams during the semester will be open-book. Exams will last 1 to 1.5 hours. The final will be open-book and no collaboration will be permitted. You will be given the whole lecture session to complete the final. Homework will not be graded or collected. The lowest quiz grade will be dropped; this does not apply to the exam or the final. Letter grades will be assigned as specified in the NESAs student handbook. At the option of the instructor a curve may be applied to the final grade. Individual exams and quizzes will not be curved.

Lecture Structure:

The first 10 minutes of lecture will be set-aside for general class business and attendance. Please try to arrive on time. A 40 minute open review session using the previous week's homework as a starting point will follow this. After a 10-minute break there will be up to two sessions of a 45-60 minutes for lecture with a ten-minute break following each session. The last half hour of class will be reserved for further review or a quiz (if scheduled).

Attendance and Other comments:

Guidelines for attendance and academic conduct are as specified in the NESAs Student Handbook. You are allowed two unexcused absences and tardiness of more than 15 minutes counts as an unexcused absence. Since the course only meets once a week, please direct schedule conflicts and concerns or questions regarding the course or material to the instructor in a timely manner. All inquiries, in turn, will be address promptly. Announcements, quizzes, keys, exams (except for the final), handouts, etc will be posted to the course web site.

Tentative Lecture Schedule:

Date	Chapters/Sections	Subject	Quiz or Exam	Covered
5/29	18.1 – 18.7	Review and Amino acids		
6/5	No class			
6/12	18.8 – 18.12	Proteins: Structure and function		
6/19	19.1 – 19.9	Enzymes	Quiz	5/29 – 6/19
6/26	22.1 – 21.3, 22.7 – 22.9, 21.1 – 21.7	Carbohydrates, Bioenergetics and overview of metabolism	Exam	5/29 – 6/19
7/3	21.8 – 21.9, 23.2 – 23.3, 23.5 – 23.9	Carbohydrate metabolism, citric acid cycle, electron transport chain		
7/10	23.10 – 23.11, 24.1 – .7	Glycogen, Gluconeogenesis, Lipids and membranes	Quiz	6/26 – 7/10
7/17	25	Lipid metabolism and synthesis		
7/24	27	Protein and amino acid metabolism	Quiz	7/17 – 7/24
7/31	26.1 – 26.9	Nucleic Acids: DNA and RNA	Exam	7/3 – 7/24
8/7	26.10 – 26.13	Protein Synthesis	Quiz	7/31 – 8/7
8/14	Final		Final	Cumulative

Homework: Subject to change. Additional may be assigned.

Date	Problems
5/29	18.18, 34, .38, .40
6/12	18.20, .23, .50, .62, .64, .66, .78
6/19	19.18, .30, .34, .40, .44
6/26	22.34, .44, .46, .60, .86, & 21.38, .42
7/3	23..21, .32, .38, .62 & 21.48, .50, .54, .60, .62, .64, .78
7/10	23.16, .30, .56, .52 & 24.15, .16, .38, .42, .74, .76,
7/17	21.15 & 25.8, .9, .12, .28, .34, .52,
7/24	27.8, .11, .16, .22, .24, .26, .36, .46
7/31	26.18, .20, .21, .24, .38, .40, .50, .60
8/7	26.22, .32, .56, .58, .62, .66, .70